
मुलायम साबुन — विशिष्टि

(पहला पुनरीक्षण)

Soft Soap — Specification

(*First Revision*)

ICS 71.100.40

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Soaps and Other Surface Active Agents Sectional Committee had been approved by the Chemical Division Council.

Soft soap is distinguished from ordinary hard soap by its soft, jelly-like texture and thus is usually packed in metal or waxed paper containers.

Soft soap is intended for general washing and cleaning purposes and can be used as lubricant and coolant in machine operation/conveyor belts in the form of aqueous solution.

This standard, originally published in 1974, was formulated deriving assistance from the following publications:

- a) G/O. P. 61E-1960 Soft soap. Directorate General of Supplies & Disposals, Government of India.
- b) BS 1913 : 1990 Soft soap. British Standards Institution

During this revision, Amendment No.1, 2, 3, 4 and 5 have been incorporated and also the referred standards have been updated.

The composition of the Committee responsible for the formulation of the standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard
SOFT SOAP — SPECIFICATION
(First Revision)

1 SCOPE

This standard prescribes requirements and methods of sampling and test for soft soap.

2 REFERENCES

The standards listed below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

IS No.	Title
286 : 1978	Methods of sampling and test for soaps (<i>second revision</i>)
1070 : 1992	Reagent grade water (<i>third revision</i>)

3 TERMINOLOGY

For the purpose of this standard, the definitions given in 2 of IS 286 shall apply.

4 TYPES

The material shall be of following two types of soft soap with potassium or sodium base or a mixture of these bases

- a) Type 1 is suitable for general toilet purpose, and
- b) Type 2 for domestic cleaning purpose.

5 REQUIREMENTS

5.1 Description

The material shall be homogeneous translucent mass of jelly-like texture, free from putrescent, fishy or objectionable odour. It applies to soft soap with potassium or sodium base or a mixture of these bases. It does not apply to soaps for medicinal purposes. It may or may not be suitably perfumed subject to agreement between the purchaser and the supplier. It shall be free from foreign matter and visible impurities.

5.2 The material shall quickly form a satisfactory lather while in use and shall show no sign of any deterioration on storage in original sealed containers under normal conditions for a period of 12 months.

NOTE — The material shall be considered as showing no sign of deterioration if it is still conforms to 5.1.

5.3 Consistency

The soap shall not become liquid at 32°C, and no liquid shall separate when the soap is maintained at 0°C, for 24 h.

5.4 Calculation of Results

Soft soap is liable to lose moisture on keeping. The results obtained for unsaponified and unsaponifiable matter, total free alkali and free caustic alkali by the specific methods of analysis shall, therefore, be recalculated in relation to the specified minimum total fatty matter by means of the equation:

Recalculated result =

$$\text{Actual result} \times \frac{\text{Minimum specified total fatty matter content}}{\text{Actual total fatty matter content}}$$

5.5 The material shall comply with the requirements given in Table 1.

6 PACKING AND MARKING

6.1 Packing

The material shall be supplied in suitable containers as agreed to between the purchaser and the supplier.

6.2 Marking

The packages shall be securely closed and marked with the following particulars:

- a) Name of manufacturer;
- b) Type and brand name of the material and recognized trade-mark, if any;
- c) Year and month of manufacture;
- d) Net mass when packed;
- e) Batch No. or Lot No. in code or otherwise; and
- f) Critical ingredients mentioning the actual compound in descending order up to a limit of 0.5 percent by mass, as identified under ECO-Mark Scheme.

6.3 BIS Certification Marking

The product may also be marked with the Standard Mark.

Table 1 Requirements for Soft Soap
(Clauses 5.5, 7.2.1, 7.3.1 and 8.1)

SI No.	Characteristic	Requirement		Method of Test, Ref to	
		Type 1	Type 2	Cl in IS 286	Annex
(1)	(2)	(3)	(4)	(5)	(6)
i)	Total fatty matter, percent by mass, <i>Min</i>	38	28	15	—
ii)	Unsaponified and unsaponifiable matter, percent by mass, <i>Max</i>	2.5	2.0	12	—
iii)	Rosin acids ¹⁾ , percent by mass of total fatty matter, <i>Max</i>	Nil	15.0	14	—
iv)	Total free alkali (as K ₂ O), percent by mass, <i>Max</i>	0.50	0.50	—	A
v)	Free caustic alkali (as K ₂ O), percent by mass, <i>Max</i>	0.10	0.10	6	—

(see Note below)

NOTE — Modify the formula given in 6 of IS 286 as given below: Free caustic alkali (as K₂O), percent by mass = 4.7 $\frac{VN}{M}$

where
 V = volume in ml of standard sulphuric acid or hydrochloric acid used,
 N = normality of the acid, and
 M = mass in g of the material taken for test.

¹⁾ If rosin is not used as an ingredient during the manufacture of soap there is no need to test the requirement of rosin acid content.

6.3.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7 SAMPLING

7.1 For this purpose general precautions, scale of sampling and preparation of test samples, shall be as prescribed in 3.1, 3.2 and 3.3 respectively of IS 286.

7.2 Number of Tests

7.2.1 Tests for the determination of characteristics given at SI No. (i), (ii), and (v) in Table 1 shall be conducted on each of the individual samples separately.

7.2.2 Tests for determination of all the remaining characteristics shall be conducted on the composite sample.

7.3 Criteria for Conformity

7.3.1 For Individual Samples

For each of the characteristics which have been determined on the individual samples (7.2.1) the mean (\bar{x}) and the range (R) of the test results shall be calculated as follows:

$$\text{Mean } (\bar{x}) = \frac{\text{the sum of test results}}{\text{number of test results}}$$

Range (R) = The difference between the maximum and the minimum value of the test results.

The lot shall be deemed as conforming to the requirement if the expression ($-0.4 R$) is greater than or equal to minimum value given in Table 1 and ($+0.4 R$) is less than or equal to maximum value given in Table 1.

7.3.2 For Composite Sample

For declaring the conformity of the lot to requirements of other characteristics determined on the composite sample, results for each of the characteristics shall satisfy the relevant requirement.

8 TESTS

8.1 Tests shall be conducted as prescribed in IS 286 and in Annex A. Reference to the relevant clauses of that standard and Annex A is given in col 5 and 6 of Table 1 respectively.

8.2 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (see IS 1070) shall be employed in tests.

NOTE — ‘Pure chemicals’ shall mean chemicals that do not contain impurities which affect the results of analysis.

ANNEX A

[Table 1, Sl No.(iv)]

DETERMINATION OF TOTAL FREE ALKALI

A-1 REAGENTS

A-1.1 Ethanol — 95 percent (v/v).

A-1.2 Ethanolic Potassium Hydroxide Solution

0.1 N.

A-1.3 Standard Sodium Hydroxide Solution — 1 N.

A-1.4 Standard Sulphuric Acid — 1 N.

A-1.5 Thymolphthalein Indicator — 0.1 percent in 60 percent ethanol.

A-2 PROCEDURE

Boil 100 ml of ethanol in a 400-ml flask under reflux, add 1 ml of thymolphthalein indicator, allow to cool to 70°C and neutralize at that temperature with ethanolic potassium hydroxide solution. Add 10 g of the sample and dissolve it as quickly as possible by heating immediately after complete solution of the soap, add 3 ml of standard sulphuric acid and boil on a water-

bath for at least 10 min to ensure complete removal of carbon dioxide. If the solution is colourless, cool to 70°C and titrate with standard sodium hydroxide solution until the blue colour reappears. If after boiling with acid the blue colour returns, add a further quantity of standard sulphuric acid and repeat the boiling, the titration being completed as above. The excess of standard sulphuric acid finally titrated shall be not less than 1 ml.

A-3 CALCULATION

$$\text{Total free alkali (as K}_2\text{O), } = 4.7 \frac{(V_1 - V_2)}{m} \text{ percent by mass}$$

where

V_1 = volume in ml of standard sulphuric acid added,

V_2 = volume in ml of standard sodium hydroxide solution required, and

M = mass in g of the sample taken for the test.

ANNEX B

(Foreword)

COMMITTEE COMPOSITION

Soaps and Other Surface Active Agents Sectional Committee, CHD 25

<i>Organization</i>	<i>Representative(s)</i>
Drugs Controller General of India, New Delhi	DR G. N. SINGH (Chairman) SHRI S. DEY (<i>Alternate</i>)
Association for Consumer's Action on Safety and Health, Mumbai	DR YOGESH KAMDAR SHRI SATYADEV PANDEY (<i>Alternate</i>)
Central Pollution Control Board, Delhi	DR M. Q. ANSARI DR REKHA L. SITASAWAD (<i>Alternate</i>)
Central Revenue Control Laboratory, New Delhi	SHRI Y. K. S. RATHORE SHRI S. C. MATHUR (<i>Alternate</i>)
Colgate-Palmolive (India) Ltd, Mumbai	DR SHASHANK POTNIS SHRI VILAS TULLE (<i>Alternate</i>)
Consumer Education & Research Centre, Ahmedabad	MS ANINDITA MEHTA MS DOLLY S. JANI (<i>Alternate</i>)
Consumer Guidance Society of India, Mumbai	DR SITARAM DIXIT SHRI B. V. DESAI (<i>Alternate</i>)
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Directorate General of Health Services, New Delhi	REPRESENTATIVE
Directorate General of Supplies & Disposals, New Delhi	SHRI N. K. KAUSHAL SHRI A. K. M. KASHYAP (<i>Alternate</i>)
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Ministry of Micro Small & Medium Enterprises (MSME), New Delhi	SHRI H. S. BISHT
National Test House, Ghaziabad	SHRI M. CHAKRABORTY DR (SHRIMATI) MADHURIMA MISRA (<i>Alternate</i>)
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Procter & Gamble India, Mumbai	MS PRIYANKA BHAT SHRI GAURAV NANDRAJOG (<i>Alternate</i>)
In personal capacity (8/308, Rajendra Nagar, Sector 3, Sahibabad Ghaziabad)	SHRI M. MITRA (Ex DGQS)
Voluntary Organization in Interest of Consumer Education (VOICE), New Delhi	SHRI M. A. U. KHAN SHRI B. K. MUKHOPADHYAYA (<i>Alternate</i>)
BIS Directorate General	DR RAJIV K. JHA Scientist 'F' and Head (Chemical) [Representing Director General (<i>Ex-officio</i>)]

Member Secretary

SHRI T. ARIVUDAIYANAMBI
Scientist 'E' (Chemical), BIS

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